AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-7 (canceled).

Claim 8 (new): A semiconductor device comprising:

a high voltage production circuit that produces a high voltage; and

a high voltage waveform conversion circuit provided at a subsequent stage of the high voltage production circuit that gradually outputs a high voltage by converting the waveform of the high voltage of the high voltage production circuit.

Claim 9 (new): The semiconductor device according to claim 8, further comprising a memory cell in which data rewriting is performed by using a high voltage, wherein the high voltage waveform conversion circuit gradually applies the high voltage to the memory cell.

Claim 10 (new): The semiconductor device according to claim 8, wherein the high voltage waveform conversion circuit comprises a delay circuit that delays the high voltage of the high voltage production circuit, and a voltage conversion switching element that lowers the delayed high voltage by a predetermined value.

Claim 11 (new): The semiconductor device according to claim 9, wherein the high voltage waveform conversion circuit comprises a delay circuit that delays the high voltage of the high voltage production circuit, and a voltage conversion switching element that lowers the delayed high voltage by a predetermined value.

Claim 12 (new): The semiconductor device according to claim 10, wherein the voltage conversion switching element is an N-type MOS transistor in which the high voltage delayed by the delay circuit is input to a gate thereof and the high voltage that has undergone conversion by being lowered by a predetermined value is output from a source thereof.

Claim 13 (new): The semiconductor device according to claim 11, wherein the voltage conversion switching element is an N-type MOS transistor in which the high voltage delayed by the delay circuit is input to a gate thereof and the high voltage that has undergone conversion by being lowered by a predetermined value is output from a source thereof.

Claim 14 (new): The semiconductor device according to claim 8, wherein the high voltage waveform conversion circuit comprises a test signal input section and, when a test signal is input to the test signal input section, the high voltage waveform conversion circuit outputs the high voltage of the high voltage production circuit without converting the waveform.

Claim 15 (new): The semiconductor device according to claim 9, wherein the high voltage waveform conversion circuit comprises a test signal input section and, when a test signal is input to the test signal input section, the high voltage waveform conversion circuit outputs the high voltage of the high voltage production circuit without converting the waveform.

Claim 16 (new): The semiconductor device according to claim 14, wherein the high voltage waveform conversion circuit comprises a delay circuit that delays the high voltage of the high voltage production circuit, a voltage conversion switching element that lowers the delayed high voltage by a predetermined value, and a short-circuit switching element provided parallel to the voltage conversion switching element that short-circuits the voltage conversion switching element when the test signal is input to the test signal input section.

Claim 17 (new): The semiconductor device according to claim 15, wherein the high voltage waveform conversion circuit comprises a delay circuit that delays the high voltage of the high voltage production circuit, a voltage conversion switching element that lowers the delayed high voltage by a predetermined value, and a short-circuit switching element provided parallel to the voltage conversion switching element that short-circuits the voltage conversion switching element when the test signal is input to the test signal input section.

Claim 18 (new): The semiconductor device according to claim 16, wherein the voltage conversion switching element is an N-type MOS transistor in which the high voltage delayed by the delay circuit is input to the gate thereof and the high voltage that has undergone conversion by being lowered by a predetermined value is output from the source thereof, and the short-circuit switching element is a P-type MOS transistor that is turned ON and outputs the high voltage of the high voltage production circuit as is when the test signal is input to the test signal input section.

Claim 19 (new): The semiconductor device according to claim 17, wherein the voltage conversion switching element is an N-type MOS transistor in which the high voltage delayed by the delay circuit is input to the gate thereof and the high voltage that has undergone conversion by being lowered by a predetermined value is output from the source thereof, and the short-circuit switching element is a P-type MOS transistor that is turned ON and outputs the high voltage of the high voltage production circuit as is when the test signal is input to the test signal input section.